Derrick Kyei

Software & AI Engineer

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SUMMARY

Software Engineer with 5 years of experience delivering cloud, data, and DevOps solutions at enterprise scale. Specialized in Azure DevOps, data engineering, and applied AI, with hands-on experience in modernizing legacy systems and deploying analytics pipelines. Leveraging Deep Learning frameworks for predictive analytics and natural language processing. Committed to building secure, scalable infrastructure while utilizing Machine Learning best practices to drive operational efficiency and data-driven decision making.

EDUCATION:

University of the Cumberlands   **Williamsburg, KY**
Master of Science, Artificial Intelligence (**GPA**: 4.00)   August 2025 - Expected August 2026

The University of Georgia - Franklin College of Arts and Sciences   **Athens, GA**
Bachelor of Science, Computer Science (**GPA**: 3.58)   January 2018 - December 2019
Honors & Awards: HOPE Scholarship Recipient

Georgia State University - Perimeter College   **Decatur, GA**
Associate of Science, Computer Science (**GPA**: 3.79)   January 2015 - December 2017
Honors & Awards: Phi Theta Kappa Honor Society, National Society of Collegiate Scholars

CERTIFICATIONS:

Microsoft Azure Fundamentals (AZ-900)

TECHNICAL SKILLS:

Cloud & DevOps: Microsoft Azure, Azure Devops, CI/CD Pipelines, Terraform, Powershell, Bash, Infrastructure as Code
Data & AI: PySpark, Databricks, Delta Lake, SQL, ETL Pipelines, TensorFlow Keras, Data Modeling
Programming: Java, Python, C#, Typescript, JavaScript, SQL
Tools & Platforms: Git, Jira, REST APIs, Maven, Linux/Unix, Agile/Scrum

INDEPENDENT RESEARCH:

Independent Research & Technical Development   March 2024 - August 2025
- Developed independent projects, including Generative Adversarial Networks (GANs) and natural language processing models, to maintain proficiency in Python and data orchestration.
- Conducted research into Neural Network architectures and Deep Learning frameworks (TensorFlow/Keras) in preparation for graduate-level studies.
- Built and maintained a public technical portfolio focusing on best practices in cloud architecture, data engineering best practices, and secure DevOps in regulated environments.

PROFESSIONAL EXPERIENCE:

Databricks   **Alpharetta, GA**
Senior Software Engineer - AT&T Inc.   January 2023 - March 2024
- Developed and maintained PySpark ETL pipelines in Databricks to process multi-source datasets, improving data reliability and enabling analytics and AI workloads. Automated extract, transform, and load processes to enhance data processing efficiency and reliability.
- Implemented medallion architecture (bronze, silver, gold) using Delta Lake to incrementally improve data quality and governance.
- Designed CI/CD pipelines for Databricks notebooks and schema migrations, reducing deployment errors and improving data freshness.

- Estimated cluster sizing, monitored performance, and resolved Spark job failures to maintain stable production workloads.

Azure DevOps   **Alpharetta, GA**
Senior Specialist Software Engineer - AT&T Inc.   November 2021 - December 2022
- Built and automated CI/CD pipelines supporting enterprise applications, improving deployment consistency and release velocity.
- Designed Azure infrastructure using Terraform, implementing infrastructure-as-code and auto-scaling configurations.
- Supported secure application deployments by integrating Azure Key Vault for secrets management.
- Collaborated in Agile/DevOps teams to support build, test, and release automation across multiple environments.

HR Technology   **Alpharetta, GA**
Software Engineer - AT&T Inc.   March 2021 - November 2021
- Modernized legacy applications by migrating ColdFusion systems to Angular, TypeScript, and Node.js hosted in cloud environments.
- Migrated governance-focused HR applications to AWS, supporting secure tracking and storage of sensitive data disclosures.

Project Atlas   **Atlanta, GA**
Software Engineer - AT&T Inc.   January 2020 - March 2021
- Developed full-stack web applications used by field technicians, delivering enhancements, bug fixes, and new features.
- Demonstrated solutions to stakeholders, contributing to cost savings and improved operational efficiency.

TDP App   **Atlanta, GA**
Software Engineer Intern - AT&T Inc.   June 2019 - August 2019
- Used AngularJS and NodeJS to develop a full-stack social communication app for TDP, which helped increase communication, collaboration, and grow individual networks.
- Used C# and Agile development with an intern innovation challenge team to develop a virtual reality app that leveraged 5G technology to tackle the issue of customer churn to help increase sales and improve customer service by anticipating needs and interests.

LEADERSHIP:
Diversity, Equity & Inclusion.   January 2020 - November 2021
- Supported Diversity, Equity & Inclusion initiatives at AT&T by assisting with event planning and internal communications.

PROJECTS:
Word Embedding
- Built and trained word embedding skip-gram models using TensorFlow/Keras, applying negative sampling and tf.data pipelines for efficient training.
- Preprocessed Shakespeare and IMDB-like corpora with Keras text utilities (tokenization, vocabulary construction, batching) to generate training pairs. Evaluated embeddings on downstream sentiment classification, achieving ~68% test accuracy, demonstrating transfer learning competence.

Building GAN
- Designed and implemented a Generative Adversarial Network (GAN) in TensorFlow/Keras to generate realistic handwritten digits from the MNIST dataset.
- Explored variational autoencoder (VAE) reconstruction of MNIST digits, interpreting latent space organization and dimensionality reduction.

Fertilizer App
- Used React Native to create an IOS and Android mobile application that allowed users to use their mobile devices to make quick calculations.
- Conducted user testing on the application and incorporated the results into the direction of the project.

Messenger App
- Used Java to create a full-stack native mobile Android application leveraging Firebase Cloud technology to develop an SMS application.

- Conducted user testing and incorporated results into the direction of the project.

Movie Rating Prediction Application
- Used Java and SQL to pull in existing data from IMDB database to find the best fit regression model to accurately predict genre ratings.

Project Intercept
- Attended Goodie Nation's Hackathon to focus on producing startups to reduce violence by 40% by the year 2020 locally and globally.
- Team developed a web-based communications platform to produce services to survivors of human trafficking.